

Claims

1. A plasma display panel in which a plurality of pairs of display electrodes extending in a row direction are disposed on a surface of a first substrate and a plurality of discharge cells are
5 formed along each pair of display electrodes, wherein

at least within each discharge cell,

each display electrode of the pair of display electrodes comprises a bus line and a band-shaped electrode member that is
10 electrically connected to the bus line, the band-shaped electrode member extending in the row direction and being disposed at least mainly on a same side of the bus line as a gap between the pair of display electrodes, and

each band-shaped electrode member has at least one cut-out
15 formed from a gap-side edge towards the bus line, each cut-out having a length that is shorter than a distance between the gap-side edge and the bus line.

2. The plasma display panel of Claim 1, wherein
20 each bus line is composed of a metallic material and each band-shaped electrode member is a transparent electrode.

3. The plasma display panel of Claim 1, wherein
each cut-out has one of a rectangular form, a wedge form, a
25 polygonal form, and a circular form.

4. The plasma display panel of Claim 1, wherein
when a row direction width of each cut-out is in a range of

60 μm to 120 μm inclusive,

a column direction length of each cut-out is in a range of 10 μm to 40 μm inclusive.

5 5. The plasma display panel of Claim 4, wherein the column direction length of each cut-out is in a range of 10 μm to 20 μm inclusive.

10 6. The plasma display panel of Claim 1, wherein the first substrate opposes a second substrate across a discharge space, a plurality of address electrodes being disposed on the second substrate in a stripe pattern, and in each discharge cell, the cut-outs in the pair of display electrodes are located opposite each other, and the first substrate and the second substrate are arranged so that the cut-outs are in
15 correspondence with an address electrode that is in the discharge cell.

20 7. The plasma display panel of Claim 6, wherein the cut-outs are symmetrical about the address electrode.

8. The plasma display panel of Claim 6, wherein a row direction width of each cut-out is narrower than a width of the address electrode.

25 9. The plasma display panel of Claim 6, wherein at least within each discharge cell, the address electrode comprises a plurality of branch parts extending in the column

direction.

10. The plasma display panel of Claim 1, wherein
on the first substrate, a first dielectric layer and a protective
5 layer have been layered in the stated order so as to cover the display
electrodes, and

in each discharge cell, on the protective layer, a second
dielectric layer is provided in correspondence with positions of
the cut-outs.

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11. The plasma display panel of Claim 10, wherein
the second dielectric layer comprises a band-shaped main part
whose length is in the column direction, and

the cut-outs are in correspondence with the address electrode,
15 and the main part is provided directly over the address electrode,
the main part and the address electrode sandwiching discharge space
therebetween.

12. The plasma display panel of Claim 11, wherein
20 a row direction width of the main part is less than a width
of the address electrode.

13. The plasma display panel of Claim 1, wherein
auxiliary barrier ribs extending in the row direction are
25 individually provided between discharge cells that are adjacent in
the column direction.

14. The plasma display panel of Claim 1, wherein

each band-shaped electrode member is provided with a plurality of opposing parts, one opposing part being provided on each side of each cut-out, and

at least one main discharge gap is provided in each location
5 at which two opposing parts belonging to the respective band-shaped electrode members of the pair of display electrodes oppose one another.

15. The plasma display panel of Claim 14, wherein

each opposing part includes a connecting part extending in
10 the column direction and a discharge part extending from the connecting part in the row direction, and

a main discharge gap exists in each location at which two discharge parts belonging to the respective band-shaped electrode members of each pair of display electrodes oppose each other.

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16. The plasma display panel of Claim 15, wherein

the connecting part of each opposing part is provided with a plurality of discharge parts, and

in the discharge cell, a plurality of main discharge gaps are
20 provided in the column direction between opposing parts that belong to the respective electrode members.

17. The plasma display panel of Claim 15, wherein

each discharge part is band-shaped and has a length in the
25 row direction.

18. The plasma display panel of Claim 14, wherein

the first substrate is disposed opposite a second substrate

on which a plurality of address electrodes are disposed in a stripe form,

in each discharge cell, opposing parts belonging to the respective electrode members of the pair of display electrodes are
5 located opposite each other, and

the first substrate and the second substrate are arranged so that each gap between opposing parts that are adjacent and of the same polarity corresponds with a position of the address electrode in the discharge cell.

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19. The plasma display panel of Claim 18, wherein
in each discharge cell, the opposing parts are disposed symmetrically about the address electrode.

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20. The plasma display panel of Claim 18, wherein
each gap between opposing parts that are adjacent and of the same polarity is narrower than a width of the address electrode.

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21. The plasma display panel of Claim 14, wherein
a dielectric layer is provided so as to cover the display electrodes on the surface of the first substrate on which the display electrodes are arranged, and

in each discharge cell,

at least one layer area is provided in the dielectric layer
25 in correspondence with each position of the main discharge gaps.

22. The plasma display panel of Claim 14, wherein

a dielectric layer is provided so as to cover the display

electrodes on the surface of the first substrate on which the display electrodes are arranged, and

in each discharge cell,

at least one thick layer area is provided in the dielectric
5 layer in correspondence with positions of gaps between adjacent
opposing parts of a same polarity.

23. The plasma display panel of Claim 14, wherein
auxiliary barrier ribs extending in the row direction are
10 individually provided between discharge cells that are adjacent in
the column direction.